

## ABSTRACT OF THE DISCLOSURE

A data storage system (100) and a method of storing data are described including a cache (118) with a  
5 variable number of levels (210, 220, 230, 240). Each level in the cache (118) has a cache controller (212, 222, 232, 242) and a cache memory (214, 224, 234, 244) for storing data. An address mapping is recorded and applied between each of the levels of the cache (118).  
10 The address mapping corresponds to a point in time virtual copy operation such as a snapshot copy operation applied to the cache (118) and enables point in time virtual copy operations to be carried out in electronic time. A new level is created in the cache (118) when a  
15 point in time virtual copy operation is received by the cache and a corresponding address mapping is applied to the previous level in the cache (118).